UNITED STATES PATENT AND TRADEMARK OFFICE

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09/965,125	09/27/2001	Rick Braumoeller	249768055US	1786

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SEED INTELLECTUAL PROPERTY LAW GROUP PLLC
701 FIFTH AVE
SUITE 6300
SEATTLE, WA 98104-7092

EXAMINER
KRISCIUNAS, LINDA

ART UNIT	PAPER NUMBER
3623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
	09/965,125	BRAUMOELLER ET AL.
Office Action Summary	Examiner	Art Unit
	Linda Morawski	3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>27 September 2001</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-101</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-101</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>21 September 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>Nov 4, 2002</u>.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

Claim Rejections - 35 USC § 102

1.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2.   Claims 1-2 and 4-6 are rejected under 35 U.S.C. 102(e) as being anticipated by

Greamo et al (US 2002/0095307).

As per claim 1, Greamo teaches receiving an order from a customer indicating items for

delivery to a recipient (receive order (220)): determining multiple distinct fulfillment plans

for supplying the items ("more than one option", Figure 2a), each plan indicating for

each item that the item is to be shipped from an indicated one of multiple distribution

centers and indicating a manner of shipping (paragraph 21: "When an order

is generated, commit system 100 checks the availability of all related inventory and

resources in real time. Factors considered include alternate distribution centers,

planned production, capable production, alternate sourcing and plants, and alternate

raw material suppliers." and claim 2: checking availability of item, considering inventory

and distribution needed); for each fulfillment plan modeling at least some future cost of

supplying future orders to the recipients if that plan is used (select lowest cost option

(240)); for each distribution center determining if shipping will result in an overload of

work at that center and will result in a shortage of inventory of the item at that center

(paragraph 41: checks availability of inventory to offer a low cost solution); assigning

modeled future cost based on future costs for correcting any work overloads and

inventory shortages (paragraph 60: "For example, because commit

system 100 will reserve inventory for the ship complete order, there will be

inventory carrying costs associated with the delay of lower priority orders

that could have been met in the meantime. Therefore, there is a tradeoff

between the benefits derived from increases in customer service and the costs

assumed from carrying excess inventory that need to be considered when using

the ship complete feature." The system is adding the costs incurred to ship future orders

based upon not filling them in time due to using a feature which requires the whole

order be ready prior to shipping. The reason for not filling the order in time may be due

to inventory or manpower issues.); selecting one of the fulfillment plans based on the

modeled future costs of the plan (select lowest cost option (240)) to supply the items

and indicating to supply the items of the order to the recipient using the selected

fulfillment plan (Promise order and modify supply chain (270)).

As per claim 2, Greamo teaches the ordering service is web based (claim 49)

including displaying information about the fulfillment plan via web page (Allow user to

view order status (290)).

As per claim 4, Greamo teaches modeled future costs are performed for multiple

orders over a period of time so that an optimal manner of fulfilling the orders over the

period of time can be achieved based upon fulfillment plans that are dynamically

determined at the time the order is received (paragraph 49).

As per claim 5, Greamo teaches a distribution center being a default item

distribution center for filling the order based in part on location of the order recipient

relative to the location of the distribution center, wherein the fulfillment plan indicates a

center other than the default center based upon the cost being greater to move the

order from the default center to the other center (claim 2. "checking the availability of

said desired item by said desired time considers inventory, production, manufacturing,

distribution, and transportation resources needed to deliver said desired item by said

desired time." Greamo indicates that the distribution channel availability will be verified

and if the one that is indicated (ie default center) is not available to meet the time

requirements, another will be substituted.)

As per claim 6, Greamo teaches determining a delivery date on which the items

will be supplied to the recipient if that plan is used (paragraph 43).

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Greamo.

As per claim 3, Greamo teaches determining some of the costs attributable to using the fulfillment plan to supply the items of the order (paragraph 32); assigning costs to reductions in customer goodwill that result from using the plan (Official notice is taken that it is known that there is a cost associated with goodwill that factors into a company's cost structure, therefore it would be obvious to include a goodwill cost component for the purpose of determining an overall cost.), totaling the future costs, the directly attributable costs and the goodwill reduction costs (paragraph 49), wherein selecting the plan is based upon overall cost of the plan (select lowest cost option (240)).

5.   Claims 7-101 are rejected under 35 U.S.C. 103(a) as being unpatentable over Greamo in view of Jenkins et al (US 2002/0188499), and in further view of Dunston (US 2002/0082954) for claims 45, 68-69, 71 and 99.

As per claim 7, Greamo discloses the claimed invention, but does not explicitly teach predicting demand at a future time for one or more items at different locations. Jenkins teaches that it is known to predict demand at a future time for one or more items at different locations (paragraph 10), predict time of day and day of week, and wherein the future costs and the fulfillment plan are based in part on the predicted demand at the future time so as to balance the workload at each center (paragraph 9). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the order and inventory

fulfillment of Jenkins for the purpose of minimizing costs and maximizing customer satisfaction.

As per claim 8, Greamo does not explicitly teach performing a planning activity to determine optimal loads of work and optimal inventories. Jenkins teaches that it is known to perform planning activities to determine optimal loads of work and optimal inventories of items for each center at future times and determine workload based in part on optimal loads of work and any inventory shortages based upon the optimal inventories determined (paragraph 7). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the work and optimal inventory system of Jenkins for the purpose of minimizing costs and maximizing customer satisfaction.

As per claim 9, Greamo does not explicitly teach overload status. Jenkins teaches that it is known to determine overload status for a center based upon shipping an order (paragraph 329 and 330) and determining the difference between actual and expected requests that were allocated to that center for a specified time period (paragraph 57). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the overload status feature of Jenkins for the purpose of making the system more user friendly by alerting the user to fault conditions.

As per claim 10, Greamo does not explicitly teach determining inventory balance. Jenkins teaches that it is known to determine shortage of inventory between actual and expected inventory at a current time at the center (paragraph 9). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the inventory fulfillment system of Jenkins for the purpose of meeting customer demands and minimizing costs.

As per claim 11, Greamo does not explicitly teach inventory replenishment cost. Jenkins teaches that it is known to determine if the fulfillment plan requires shipping of an item that will exhaust inventory and require a cost to replenish prior to the scheduled replenishment (paragraph 9 and 10). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the replenishment cost feature of Jenkins for the purpose of determining a more accurate cost.

As per claim 12, Greamo does not explicitly teach preferred shipping instructions. Jenkins teaches that it is known to have customer preferred ordering/shipping instructions and any fulfillment plan would contain this information (paragraph 8: shipping and receiving capacity and customer delivery windows are all simultaneously considered). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the inventory management system of Greamo with the preferred

shipping system of Jenkins for the purpose of optimizing shipping.

As per claim 13, Greamo does not explicitly teach processing lanes. Jenkins

teaches that it is known to indicate a processing lane to be used at the centers and

determine if shipping those items via those lanes will result in an overload of work at the

processing lanes (paragraph 329). Jenkins is an analogous art as it also teaches order

fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the

art at the time of the invention to combine the inventory management system of Greamo

with the processing lane feature of Jenkins for the purpose of optimizing the order

fulfillment process.

As per claim 14, Greamo does not explicitly teach an indicated method for

acquiring product. Jenkins teaches that it is known to indicate a manner for a center to

acquire some of the order items and selecting the fulfillment plan is based upon cost

and/or delays associated with the indicated acquiring method (paragraph 346-347).

Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention to

combine the inventory management system of Greamo with the method of acquiring

product feature of Jenkins for the purpose of allowing for adaptability with customer

preferences.

As per claim 15, Greamo does not explicitly teach multiple shipping centers.

Jenkins teaches that it is known to ship from multiple centers (paragraph 290) and the

fulfillment cost includes this expense (paragraph 16). Jenkins is an analogous art as it

also teaches order fulfillment methods. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to combine the inventory

management system of Greamo with the multiple shipping centers of Jenkins for the

purpose of optimizing distribution channels.

As per claim 16, Greamo does not explicitly teach multiple fulfillment options and

their cost. Jenkins teaches that it is known to receive an indication or one or more items

((210) planning component, places orders); determine multiple fulfillment options (100:

fulfillment system), each option indicating distribution center to be used (paragraph

290); also include associated cost for each option for one or more future orders

(paragraph 16: procurement optimization allows fulfillment system to decrease supply

cost), the cost calculation to include cost associated with correcting a disparity between

actual and desired level of work (production module (400)), cost associated with

correcting a disparity between actual and desired inventory level (paragraph 22, 24 and

25), cost associated with correcting inventory exhaustion (paragraph 22) and then

selecting a fulfillment option based upon the total cost (paragraph 16). Jenkins is an

analogous art as it also teaches order fulfillment methods. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention to combine the

inventory management system of Greamo with the fulfillment options of Jenkins for the

maximizing flexibility and minimizing cost.

As per claim 17, Greamo does not explicitly teach indicating to order via the

fulfillment option. Jenkins teaches that it is known to indicate the fulfillment option to be

used for the order ((300) deployment component, to create recommended shipments).

Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention to

combine the inventory management system of Greamo with the fulfillment option feature

of Jenkins for the purpose of meeting customer requirements.

As per claim 18, Greamo does not explicitly teach indicating the fulfillment option.

Jenkins teaches that it is known to indicate the fulfillment option to be used for the order

((300) deployment component, to create recommended shipments). Jenkins is an

analogous art as it also teaches order fulfillment methods. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention to combine the

inventory management system of Greamo with the fulfillment option feature of Jenkins

for the purpose of meeting customer requirements.

As per claim 19, Greamo does not explicitly teach having the customer give an

indication of the preferred fulfillment option. Jenkins teaches that it is known to receive

an indication of customer preferred fulfillment (paragraph 7: meeting customer

requirements). As per claim 20, Jenkins teaches that the fulfillment option includes cost

(paragraph 16). Jenkins is an analogous art as it also teaches order fulfillment methods.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the inventory management system of Greamo with the fulfillment

option feature of Jenkins for the purpose of meeting customer requirements.

As per claim 21, Jenkins teaches indicating the manner in which the order will be

fulfilled if that option is used ((300) deployment component). Jenkins is an analogous art

as it also teaches order fulfillment methods. Therefore, it would have been obvious to

one of ordinary skill in the art at the time of the invention to combine the inventory

management system of Greamo with the fulfillment option feature of Jenkins for the

purpose of meeting customer requirements.

As per claim 22, Jenkins teaches a web page that contains order information that

is customer viewable (claim 27: internet and paragraph 57: a web client (40) may

connect to the fulfillment system). Jenkins is an analogous art as it also teaches order

fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the

art at the time of the invention to combine the inventory management system of Greamo

with the web page feature of Jenkins for the purpose of meeting customer requirements

and allowing them an easy way to track their order information.

As per claim 23, Official notice is taken that both the concept and advantage of

bulk ordering is well known and expected in the art. It would have been obvious to have

included bulk orders in an order fulfillment system.

As per claim 24, Jenkins teaches determining whether the cost exceeds a

threshold and deciding whether to perform the determination of fulfillment options based

on the cost of the items (paragraph 241: user can set values in the database). Jenkins

is an analogous art as it also teaches order fulfillment methods. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention to combine the

inventory management system of Greamo with the cost threshold feature of Jenkins for

the purpose of realizing a more accurate cost.

As per claim 25, Jenkins teaches the indication of the items includes a recipient

wherein the determination of the fulfillment plan is based in part on the recipient

(paragraph 260). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the recipient indication feature of Jenkins for the purpose of meeting customer requirements.

As per claim 26, Jenkins teaches an indication of a customer that may order the items and wherein the determination of fulfillment is based in part on the customer (paragraph 260 where the customer is the recipient). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the fulfillment option feature of Jenkins for the purpose of meeting customer requirements.

As per claim 27, Jenkins teaches indicating the manner of supplying the items and determining the fulfillment options and associated costs with respect to the manner of supply ((300) deployment component). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the fulfillment option features of Jenkins for the purpose of meeting customer requirements via order fulfillment.

As per claim 28, Jenkins teaches prioritizing the order of fulfillment and the associated costs with doing so (paragraph 270). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to combine the inventory

management system of Greamo with the fulfillment prioritization feature of Jenkins for

the purpose of meeting customer requirements.

As per claim 29, (Official notice is taken that both the concept and advantage of

passing on the incurred cost of conducting business to the customer for the purpose of

realizing a profit is well known and expected in the art. It would have been obvious to

have included passing on the cost associated with a customer's order to the customer

as a means for reducing expenses and realizing a profit).

As per claim 30, Jenkins teaches the associated cost of the fulfillment option

reflects a cost incurred by the supplier (paragraph 22, 24 and 25). Jenkins is an

analogous art as it also teaches order fulfillment methods. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention to combine the

inventory management system of Greamo with the cost of fulfillment feature of Jenkins

for the purpose of more efficiently managing costs.

As per claim 31, Jenkins teaches the method is performed on behalf of an

ordering service (paragraph 28: external execution system to release production orders)

and some of the fulfillment options indicate distribution centers for third party suppliers

(paragraph 58: produces production orders and vendor orders). Jenkins is an analogous

art as it also teaches order fulfillment methods. Therefore, it would have been obvious

to one of ordinary skill in the art at the time of the invention to combine the inventory

management system of Greamo with the ordering service feature of Jenkins for the

purpose of more efficiently managing orders.

As per claim 32, Jenkins teaches the fulfillment options indicating a manner of shipping from the center to the recipient (paragraph 8: shipping and receiving capacity and customer delivery windows are all simultaneously considered). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the shipping fulfillment feature of Jenkins for the purpose of more efficiently managing shipping costs.

As per claim 33, Jenkins teaches the fulfillment options indicating one or more processing lanes to be used at each center (paragraph 329). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the distribution feature of Jenkins for the purpose of more efficiently managing shipping.

As per claim 34, Official notice is taken that the fulfillment option already implies acquiring the items and is therefore not a separate concept.

As per claim 35, Jenkins teaches processing some of the items at the distribution center (paragraph 81: distribution network). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the distribution center processing feature of Jenkins for the purpose of more efficiently managing the distribution process.

As per claim 36, Jenkins teaches the indication being an order (paragraph 83: orders). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the order feature of Jenkins for the purpose of more efficiently managing the distribution and order fulfillment process.

As per claim 37, Jenkins teaches the indication being a potential order by a potential customer (Official notice is taken that both the concept and advantage of a "request for quote" (RFQ) or potential order is well known and expected in the art. It would have been obvious to include RFQs in an ordering processing system for the purpose of gaining a potential order that may realize into an actual order.)

As per claim 38, Jenkins teaches selecting a fulfillment option which includes ranking the options using a specific criteria and selecting the one with the highest rank (paragraph 349). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the ranking feature of Jenkins for the purpose of more efficiently managing orders.

As per claim 39, Jenkins teaches the work level disparity carrying a positive cost (production module (400)), wherein cost could include carrying excess inventory to prepare for the holiday (paragraph 332)). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of

Greamo with the work level feature of Jenkins for the purpose of more efficiently managing inventory.

As per claim 40, Jenkins teaches the desired work level at the center is an optimal level of work for the center (see load leveler (410)). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the work level feature of Jenkins for the purpose of more efficiently managing costs associated with work level.

As per claim 41, Jenkins teaches cost for correction of inventory is a positive cost to reflect shortage of inventory (paragraph 6: expedited shipments are used to compensate for shortage of inventory and they cost the company money). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the inventory correction feature of Jenkins for the purpose of more efficiently managing costs.

As per claim 42, Jenkins teaches desired inventory level is an optimal level for that distribution center (paragraph 8: optimize inventory). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the inventory level feature of Jenkins for the purpose of more efficiently managing inventory and costs.

As per claim 43, Jenkins teaches for each fulfillment option determining an overall cost that includes associated costs of use and some costs attributable to supplying the items ((300) deployment component). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the cost determination feature of Jenkins for the purpose of more efficiently managing costs.

As per claim 44, Official notice is taken that it is known that there is a cost associated with goodwill that factors into a company's cost structure, therefore it would be obvious to include a goodwill cost component for the purpose of determining an overall cost.

As per claim 45, Dunston teaches determining an overall cost of a fulfillment option which includes the costs of use and costs for one or more of the centers that reflect a willingness for the center to fill the order (paragraph 16). Dunston is an analogous art as it also teaches a distribution system. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the cost feature of Dunston for the purpose of more efficiently managing costs.

As per claim 46, Jenkins teaches adjusting a mechanism for calculating the costs reflecting future corrections in order to control how quickly the corrections will occur (paragraph 59: safety stock. The stock is used as a means for controlling costs). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention to

combine the inventory management system of Greamo with the cost feature of Jenkins

for the purpose of more efficiently managing costs.

As per claim 47, Jenkins teaches the costs reflecting future corrections are

projected costs (Official notice is taken that the definition of future corrections already

implies a projection as it is impossible to predict the future.)

As per claim 48, Jenkins teaches before receiving of the indication of items,

predicting demand for multiple items (paragraph 29: planning period) and wherein the

desired levels of work and the desired levels of inventory are based in part on predicted

demand (paragraph 5: increase in demand causes an alter to operations. The business

must select the least cost strategy. An alteration to operations and a low cost strategy

will impact the level of work and inventory, therefore there is a direct correlation

between demand and work level and inventory.). Jenkins is an analogous art as it also

teaches order fulfillment methods. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to combine the inventory

management system of Greamo with the work and inventory demand features of

Jenkins for the purpose of more efficiently managing labor, inventory and costs.

As per claim 49, Jenkins teaches that demand is based upon a future time

(paragraph 29: forecast. Forecast implies a future time.). Jenkins is an analogous art as

it also teaches order fulfillment methods. Therefore, it would have been obvious to one

of ordinary skill in the art at the time of the invention to combine the inventory

management system of Greamo with the demand feature of Jenkins for the purpose of
more efficiently managing product demand.

As per claim 50, Jenkins teaches predicting demand for multiple regions
associated with distribution centers (paragraph 306: forecast list includes source
location). Jenkins is an analogous art as it also teaches order fulfillment methods.
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the
invention to combine the inventory management system of Greamo with the demand
feature of Jenkins for the purpose of more efficiently managing product demand with
respect to the distribution centers.

As per claim 51, Jenkins teaches before receiving indication of items,
determining the desired work level and inventory level values for the distribution center
at a future time, and wherein the performing of the group corresponds to the future time
such that the values of the desired work and inventory levels that are used to determine
the disparities are the previously determined values (paragraph 8). Jenkins is an
analogous art as it also teaches order fulfillment methods. Therefore, it would have
been obvious to one of ordinary skill in the art at the time of the invention to combine the
inventory management system of Greamo with the demand features of Jenkins for the
purpose of more efficiently managing inventory, resources and cost.

As per claim 52, Jenkins teaches automatically deciding to determine values for
the desired work levels and inventory levels based upon current conditions (paragraph
7). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it
would have been obvious to one of ordinary skill in the art at the time of the invention to

combine the inventory management system of Greamo with the value determination

feature of Jenkins for the purpose of more efficiently managing inventory and labor.

As per claim 53, Jenkins teaches identifying a center as a default center, wherein

a cost that reflects a correction of inventory exhaustion is included in the associated

cost of use for an option only if the option indicates a center other than the default

center (paragraph 47: each supply method has optional routes, and paragraph 49: the

commit system (100) evaluates the cost for each course of action. The default center

would be the one selected prior to determining optional routes and the commit system

calculates the additional cost of using a route other than the original one.) Jenkins is an

analogous art as it also teaches order fulfillment methods. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention to combine the

inventory management system of Greamo with the default center feature of Jenkins for

the purpose of more efficiently managing distribution.

As per claim 54, Jenkins teaches a computer readable medium comprising (claim

27 states the Internet can be used with the network, and a network requires computer

readable medium in order to function): to receive an indication or one or more items

((210) planning component, places orders); determine multiple fulfillment options (100:

fulfillment system), each option indicating distribution center to be used (paragraph

290); also include associated cost for each option for one or more future orders

(paragraph 16: procurement optimization allows fulfillment system to decrease supply

cost), the cost calculation to include cost associated with correcting a disparity between

actual and desired level of work (production module (400)), cost associated with

correcting a disparity between actual and desired inventory level (paragraph 23, 24 and

25), cost associated with correcting inventory exhaustion (paragraph 22) and then

selecting a fulfillment option based upon the total cost (paragraph 16). Jenkins is an

analogous art as it also teaches order fulfillment methods. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention to combine the

inventory management system of Greamo with the fulfillment feature of Jenkins for the

purpose of more efficiently managing product order fulfillment.

As per claim 55, Greamo teaches modeled future costs are performed for

multiple orders over a period of time so that an optimal manner of fulfilling the orders

over the period of time can be achieved based upon fulfillment plans that are

dynamically determined at the time the order is received (paragraph 49).

As per claim 56, Greamo teaches the computer readable medium is a memory of

a computing device (database (160)).

As per claim 57, Greamo teaches the computer readable medium is a data

transmission medium transmitting a generated data signal containing the contents

(paragraph 27: network and switchover server, and commit server (110)).

As per claim 58, Greamo teaches the contents of the medium are instructions

that when executed cause the computing device to perform the method (paragraph 32).

As per claim 59, Jenkins teaches determining multiple fulfillment options (100:

fulfillment system), each option indicating distribution center to be used (paragraph

290); to include associated cost for each option for one or more future orders

(paragraph 16: procurement optimization allows fulfillment system to decrease supply

cost), the cost calculation to include cost associated with correcting a disparity between actual and desired level of work (production module (400)); and selecting a fulfillment option based upon the future total cost (paragraph 16). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the fulfillment feature of Jenkins for the purpose of more efficiently managing distribution.

As per claim 60, Greamo teaches the option determiner component, future cost determiner component, and the selection component are executing in the memory of the computing device (paragraph 32, memory in the commit server).

As per claim 61, Jenkins teaches the cost calculation to include cost associated with correcting a disparity between actual and desired level of work (production module (400)); and calculating a cost associated with correcting a disparity between actual and desired inventory level (paragraph 23, 24 and 25). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the cost calculation feature of Jenkins for the purpose of more efficiently managing costs.

As per claim 62, Greamo teaches determining multiple distinct fulfillment plans for supplying the items ("more than one option", Figure 2a), indicated one of multiple distribution centers (claim 2: checking availability of item, considering inventory and distribution needed); Jenkins teaches means for associating future costs with the

fulfillment plan, the projected future cost based upon correcting one or more conditions

that result from using the plan (production module (400)) and; means for selecting a

plan to be used for fulfilling the order based at least in part on the projected future costs

for the selected fulfillment plan (paragraph 16).

As per claim 63, Jenkins teaches receiving an indication of an order ((210)

planning component, places orders), for each distribution center determining a cost that

is associated with that center to fulfill the order (paragraph 49: commit system (100)

evaluates cost for each option), the determined cost including an estimated future cost

of fulfilling at least one future order (paragraph 50: the system looks later than the

requested date); and selecting one of the centers to fill the order based on the center

having the lowest associated cost (paragraph 49: selects the least cost). Jenkins is an

analogous art as it also teaches order fulfillment methods. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention to combine the

inventory management system of Greamo with the cost determination feature of Jenkins

for the purpose of more efficiently managing costs.

As per claim 64, (Official notice is taken that both the concept and advantage of a

"request for quote" (RFQ) or potential order is well known and expected in the art. It

would have been obvious to include RFQs in an ordering processing system for the

purpose of gaining a potential order that may realize into an actual order.)

As per claim 65, Jenkins teaches the determined cost associated with the center

further includes at least one cost attributable to fulfilling the order (paragraph 49:

evaluate the relative cost associated with each course of action (where the action

means to "adjust the supply chain")) and one or more costs that reflect expected

changes in customer goodwill that result from filling the order using that center (Official

notice is taken that it is known that there is a cost associated with goodwill that factors

into a company's cost structure, therefore it would be obvious to include a goodwill cost

component for the purpose of determining an overall cost).

As per claim 66, Jenkins teaches the estimated future cost associated with the

center filling the order includes at least one of a cost of a future correction of an

imbalance between an actual amount and a desired amount of work (paragraph 5:

increase in demand causes an alter to operations. The business must select the least

cost strategy. An alteration to operations and a low cost strategy will impact the level of

work and inventory, therefore there is a direct correlation between demand and work

level and inventory) at that center and a cost of a future correction of an imbalance

between an actual amount and a desired amount of inventory at the center (paragraph

8: optimize inventory). Jenkins is an analogous art as it also teaches order fulfillment

methods. Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to combine the inventory management system of Greamo with the

future cost estimation feature of Jenkins for the purpose of more efficiently managing

costs.

As per claim 67, Greamo teaches providing an indication of the selected

fulfillment option (select lowest cost option (240)).

As per claim 68, Dunston teaches receiving an indication of an order to be

supplied to a recipient; upon receiving the indication of the order, determining a

fulfillment plan for supplying the order to the recipient so to optimize over a period of

time extending into the future a specified factor that is affected by supplying one or

more expected future order to recipients; and indicating to supply the indicated order to

the recipient by using the fulfillment plan (Figure 4). Dunston is an analogous art as it

also teaches a distribution system. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to combine the inventory

management system of Greamo with the fulfillment feature of Dunston for the purpose

of more efficiently managing the distribution process.

As per claim 69, Dunston teaches the specified factor is a total cost of supplying

multiple orders to multiple recipients that occur over the period of time (paragraph 64:

allows for tracking of business activity (tracking cost is a business activity) and

performance of service at multiple locations). Dunston is an analogous art as it also

teaches a distribution system. Therefore, it would have been obvious to one of ordinary

skill in the art at the time of the invention to combine the inventory management system

of Greamo with the cost feature of Dunston for the purpose of more efficiently managing

costs.

As per claim 70, Greamo teaches the fulfillment plan indicates a manner of

shipping items of the order to a recipient from at least one center (claim 2).

As per claim 71, Dunston teaches the order is a potential order and the indicating

to supply the order to the recipient by using the plan is based on instruction received

from a user in response to providing an indication of the plan (Figure 4: (403), (404),

(405), (406) and (407)) (Official notice is taken that both the concept and advantage of a

"request for quote" (RFQ) or potential order is well known and expected in the art. It

would have been obvious to include RFQs in an ordering processing system for the

purpose of gaining a potential order that may realize into an actual order.) Dunston is an

analogous art as it also teaches a distribution system. Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention to combine the

inventory management system of Greamo with the potential order feature of Dunston for

the purpose of more efficiently managing the planning process.

As per claim 72, Greamo teaches the plan is determined to optimize the specified

factor based on the fulfillment plan minimizing costs attributable to its use that include at

least direct costs associated with the order and an estimated future cost of fulfilling at

least one future order based on effects of the use (select lowest cost option (240)).

As per claim 73, Jenkins teaches generating predictions of future orders

for indicated items (paragraph 29: demand that was forecast), the predicted future

orders for current use in planning for later fulfilling of actual future orders (paragraph 10:

providing visibility including: procurement plans); and after the generating of the

predictions, repeatedly, [Greamo teaches] receiving an order indicating one or more

items (220); and in response to the received order determining deviations during a prior

time period between items predicted to be ordered during that time period and items

actually ordered during that time (The external system 10 modifies the planned orders

as necessary, then releases them as actual production orders or vendor orders. The

user can then import those actual orders to fulfillment system 100 as scheduled

receipts, to be used as replenishments by the planning component 210 and scheduling

component 220); for each fulfillment plan assigning a cost of using the plan that is

based on direct costs associated with the plan ((240) select lowest cost option);

adjusting the assigned costs of using at least some of the multiple fulfillment plans

based on if the plans will assist in correcting determined deviations for future orders

((260):modify supply chain and (250): offer alternate, both options would involve

correcting deviations in cost with present and subsequent orders); and selecting one of

the plans to be used for fulfilling the order based at least in part on the cost assigned to

the one selected plan ((240) select lowest cost option). Jenkins is an analogous art as it

also teaches order fulfillment methods. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to combine the inventory

management system of Greamo with the future order feature of Jenkins for the purpose

of more efficiently managing the order fulfillment process.

As per claim 74, Jenkins teaches generating predictions of the future orders is

performed periodically (paragraph 29: planning component and planning period).

Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention to

combine the inventory management system of Greamo with the future order feature of

Jenkins for the purpose of more efficiently managing the order fulfillment process.

As per claim 75, Jenkins teaches the predictions of future orders is in response

to changes in current conditions (paragraph 27: changes in supply chain data with

respect to paragraph 29: planning component). Jenkins is an analogous art as it also

teaches order fulfillment methods. Therefore, it would have been obvious to one of

ordinary skill in the art at the time of the invention to combine the inventory

management system of Greamo with the future order feature of Jenkins for the purpose

of more efficiently managing the order fulfillment process.

As per claim 76, (Official notice is taken that both the concept and advantage of a

"request for quote" (RFQ) or potential order is well known and expected in the art. It

would have been obvious to include RFQs in an ordering processing system for the

purpose of gaining a potential order that may realize into an actual order.)

As per claim 77, Jenkins teaches some of the orders adjust assigned costs of

using some of the plans based on whether the use of the plan will change customer

goodwill (Official notice is taken that it is known that there is a cost associated with

goodwill that factors into a company's cost structure, therefore it would be obvious to

include a goodwill cost component for the purpose of determining an overall cost.)

As per claim 78, Jenkins teaches deviations cause an imbalance between actual

amount and desired amount of work at a center (paragraph 7), and wherein the

adjusting assigned costs are based on costs of correcting the imbalance of the amount

of work at one or more of the centers (production module (400)). Jenkins is an

analogous art as it also teaches order fulfillment methods. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention to combine the

inventory management system of Greamo with the work level feature of Jenkins for the

purpose of more efficiently managing labor resources.

As per claim 79, Jenkins teaches the deviations cause an imbalance between the

actual and desired amount of inventory at one or more centers (paragraph 7), and

wherein the adjusting of the costs is based on costs of correcting the imbalance of the amount of inventory at one or more center (paragraph 22, 24 and 25). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the inventory feature of Jenkins for the purpose of more efficiently managing inventory.

As per claim 80, Jenkins teaches each order provides an indication of the fulfillment option selected to be used for fulfilling the order (paragraph 5: the business then must select a least-cost strategy to satisfy the order). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the fulfillment feature of Jenkins for the purpose of more efficiently managing the product fulfillment process.

As per claim 81, Greamo teaches for each indication of a potential order associated with a customer: evaluating fulfillment options for filling the order by calculating a cost of using each option ((240) select lowest cost option) based upon an expected actual cost of shipping the order (shipping costs would be factored into the lowest cost option) and on a predicted impact that using the option will have on expected future costs of filling future orders; selecting one of the options based upon the calculated costs ((240) select lowest cost option); and upon an indication from a customer to place the potential order, indicating to fill the order using the selected option.

As per claim 82, Greamo teaches for some of the potential orders, after selecting the fulfillment option for the order ((240) select lowest cost option), providing an indication of the selected option to the customer associated with the order ((270) promise order and (290) allow user to view order status) and receiving a response of the selected option to place the order (paragraph 48: The commit system 100 preferably processes orders to a customer in real time during step 230. The customer placing their order is expecting immediate feedback, such as if the order can get met, when the order can get met, and if they should place their order.)

As per claim 83, Greamo teaches for some of the potential orders, providing indications of multiple options for the order to the customer in such a manner that the customer could select any option to place the order (paragraph 48: The commit system 100 preferably processes orders to a customer in real time during step 230. The customer placing their order is expecting immediate feedback, such as if the order can get met, when the order can get met, and if they should place their order).

As per claim 84, Greamo teaches receiving an indication from the associated customer to place an order using one of the fulfillment options other than the selected option and indicating to fill the order using the one indicated option (paragraph 48: The commit system 100 preferably processes orders to a customer in real time during step 230. The customer placing their order is expecting immediate feedback, such as if the order can get met, when the order can get met, and if they should place their order).

As per claim 85, (Official notice is taken that it is known that there is a cost associated with goodwill that factors into a company's cost structure, therefore it would

be obvious to include a goodwill cost component for the purpose of determining an overall cost.)

As per claim 86, Jenkins teaches the predicted impact that using some of the options will have on future costs of filling future orders is determined based on costs of correcting deviations between an actual and desired amount of work at one or more centers (production module (400)). Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the impact feature of Jenkins for the purpose of more efficiently managing costs.

As per claim 87, Greamo teaches the predicted impact that using some of the options will have on future costs of filling orders if they include costs of correcting deviations between an actual and desired amount of inventory at one or more centers (paragraph 22, 24 and 25).

As per claim 88, Greamo teaches receiving an indication of an order for one or more items (220); determining one of the centers that is associated with the indicated order as a default center from which to fill the order (Official notice is taken that the default center concept is equivalent to the lowest cost option (240) as both would be the first selection for shipping an order); determining if filling the order at the default center would result in inventory shortage for one or more items (claim 2: step of checking the availability of said desired item by said desired time considers inventory); and when it is determined that filling the order would cause an inventory shortage, determining an alternate center for filling the order (offer alternate (250)).

As per claim 89, Greamo teaches determining whether an inventory shortage would result, this being based on projections of future orders to be filled by the distribution center (paragraph 41).

As per claim 90, Jenkins teaches determining whether an inventory shortage would result, this being based in part on optimal levels of inventory that are determined for the default distribution center (Jenkins teaches that it is known to perform planning activities to determine optimal loads of work and optimal inventories of items for each center at future times and determine workload based in part on optimal loads of work and any inventory shortages based upon the optimal inventories determined (paragraph 7).) Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the inventory feature of Jenkins for the purpose of more efficiently managing inventory.

As per claim 91, Greamo teaches receiving an indication of an order (220), determining a center that is associated with the order as a default center from which to fill the indicated order (Official notice is taken that the default center concept is equivalent to the lowest cost option (240) as both would be the first selection for shipping an order); determining if filling the order at the default center would result in an overload of work at the default center (step of checking the availability of said desired item by said desired time considers inventory, production, manufacturing, distribution, and transportation resources), and when it is determined that the filling of the order at

the default center would result in work overload, determining an alternate distribution

center for the filling of the order (offer alternate (250)).

As per claim 92, Greamo teaches determining whether a work overload would

result being based in part on projections of future orders to be filled by the default center

(paragraph 41, with respect to "supply chain" considerations).

As per claim 93, Jenkins teaches determining whether a work overload would

result being based in part on optimal levels of work that are determined for the default

center (Jenkins teaches that it is known to perform planning activities to determine

optimal loads of work and optimal inventories of items for each center at future times

and determine workload based in part on optimal loads of work and any inventory

shortages based upon the optimal inventories determined (paragraph 7).) Jenkins is an

analogous art as it also teaches order fulfillment methods. Therefore, it would have

been obvious to one of ordinary skill in the art at the time of the invention to combine the

inventory management system of Greamo with the work overload feature of Jenkins for

the purpose of more efficiently managing the work level.

As per claim 94, Greamo teaches a computer readable medium containing a

data structure for use in filling orders that is based on costs associated with filling future

orders (select lowest cost option (240)), each entry comprising: an indication of a

distribution center to be used to fill the order (modify supply chain (270) and group order

(280)); an indication of at least one associated cost of use that reflects costs associated

with filling one or more future orders based on using the plan to fill the order (select

lowest cost option (240)).

As per claim 95, Jenkins teaches the associated costs of use for each represented plan includes at least one cost that reflects disparity between an actual level of work and a desired level of work at one or more centers indicated for the fulfillment plan (Jenkins teaches that it is known to perform planning activities to determine optimal loads of work and optimal inventories of items for each center at future times and determine workload based in part on optimal loads of work and any inventory shortages based upon the optimal inventories determined (paragraph 7).) Jenkins is an analogous art as it also teaches order fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the inventory management system of Greamo with the cost feature of Jenkins for the purpose of more efficiently managing costs.

As per claim 96, Greamo teaches the associated costs of use for each plan includes at least one cost that reflects a disparity between an actual inventory level and a desired level at one or more centers indicated for the fulfillment plan (Greamo teaches the predicted impact that using some of the options will have on future costs of filling orders if they include costs of correcting deviations between an actual and desired amount of inventory at one or more centers (paragraph 22, 24 and 25).

As per claim 97, Greamo teaches each entry of data structure further comprises an indication of at least one associated cost of use that reflects at least one cost directly attributable to supplying items of the order (paragraph 32) and/or at least one associated cost of use that reflects at least some expected changes in customer goodwill (Official notice is taken that it is known that there is a cost associated with

goodwill that factors into a company's cost structure, therefore it would be obvious to

include a goodwill cost component for the purpose of determining an overall cost.)

As per claim 98, Jenkins teaches each entry of data further comprises an

indication of a manner of transporting the order from the indicated center to a recipient

of the order, an indication of one or more processing lanes to be used at each of the

indicated centers, an indication of a manner of acquiring at least some items of the

order, and/or an indication of a manner of processing at least some of the items at the

centers (paragraph 137 and 138). Jenkins is an analogous art as it also teaches order

fulfillment methods. Therefore, it would have been obvious to one of ordinary skill in the

art at the time of the invention to combine the inventory management system of Greamo

with the data entry feature of Jenkins for the purpose of more efficiently managing the

product fulfillment process.

As per claim 99, Dunston teaches the data structure is stored as a multi-

dimensional array comprising a dimension representing distribution centers and at least

one of a dimension representing manners of transporting the order, a dimension

representing manners of acquiring items of the order, and a dimension representing

manners of processing at least some items of the order at a distribution center (See

Figure 1). Dunston is an analogous art as it also teaches a distribution system.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention to combine the inventory management system of Greamo with the data

storage feature of Dunston for the purpose of more efficiently managing the order

fulfillment process.

As per claim 100, Greamo teaches a computer readable medium is a data transmission medium transmitting a generated data signal containing the data structure (paragraph 27: a commit server 110, a network or Web-based business-to-business (B2B) user interface 120, public APIs 130, a batch import 140, a statistics applet 150, a database 160, and a switchover server 170.).

As per claim 101, Greamo teaches the computer readable medium is one or more computer memories that collectively contain the data structure (paragraph 27: a commit server 110, a network or Web-based business-to-business (B2B) user interface 120, public APIs 130, a batch import 140, a statistics applet 150, a database 160, and a switchover server 170.).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following patents also teach the subject matter of order processing and fulfillment and product distribution. Wilson et al (US 2002/0133387).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Linda Morawski whose telephone number is 571-272-6931. The examiner can normally be reached on Monday through Friday, 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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LMM

TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600